Remarks

Reconsideration of the above-identified application in view of the following remarks is respectfully requested.

By this paper, Applicants have canceled claims 5-6, 12, and 14, amended claims 1, 9, 13, and 17, and added new claims 21-24. After entry of this amendment, claims 1-4, 7-13, and 15-24 will be pending. No new matter has been added by virtue of the present amendments.

As a formal matter, new figures are being submitted herewith for the Examiner's approval. The figures have been amended as suggested in paragraph 2 of the Office Action.

Claims 5 and 13 were objected because of the phrase "capable of." Claim 5 has been canceled and claim 3 has been amended in the matter suggested by the Examiner. Accordingly, Applicants respectfully request withdrawal of the objection of claim 13.

Claims 1 and 4-8 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,223,526 to Wissler et al., hereinafter *Wissler*. Applicants respectfully traverse this rejection.

Without acquiescing in the Examiner's grounds for rejection, and for the purpose of expediting prosecution, claim 1 has been amended to incorporate some of the limitations of claim 5 and the limitations of claim 6 to more particularly claim the present invention.

Claim 1 recites a method for operating an exhaust gas purification system. The method comprises directing heated fuel from a high pressure fuel injection system to a reductant source heating frozen reductant within the reductant source with thermal energy

transferred from the heated fuel and supplying the reductant to an exhaust gas pipe in front of a catalyst for purification of exhaust gas. The reductant source is in fluid communication with a reductant tank. The reductant tank is located within a fuel tank adapted for supplying fuel to the high press fueling system. The reductant source has at least a substantial portion located outside the fuel tank.

Wissler does not disclose, teach or suggest the present invention. *Wissler* is directed to a dual compartment fuel storage tank. *Wissler* deals with the problem of reductant freezing. (Column 1, lines 40-42.) *Wissler* notes that in the prior art, the reducing agent is stored in a separate storage container spaced from the primary vehicle fuel tank. (Column 1, lines 32-34.) *Wissler* also notes that such configuration requires additional space and additional mounting brackets. (Column 1, lines 42-55.) To overcome the problem *Wissler* perceives to be in the prior art, he discloses a dual compartment fuel storage tank wherein the fuel and the reductant tank are contained in one tank to form a single structural unit which can be fastened as if the two tanks were a single tank. (Column 2, lines 4-9.) The reductant tank is heated in the fuel tank. There is no separate reductant source disclosed.

The present invention as recited in claim 1 claims a reductant tank in communication with a reductant source. The reductant tank is located within the fuel tank. The reductant source of the present invention is heated with thermal energy transferred from the heated fuel. This heating takes place outside the fuel tank. *Wissler* does not disclose these aspects of the present invention. Accordingly, the 35 U.S.C. § 102(b) the rejection of *Wissler* must be withdrawn.

Claim 1 was also rejected under 35 U.S.C. § 102 as being anticipated by German Patent Application DE 201 19513 (see the equivalent U.S. patent application 2003/0101715), hereinafter *German Patent Application*. Notably, claim 6 was not rejected in view of the *German Patent Application*. As discussed above, claim 1 includes the limitations of claim 6 and is therefore patentable over the *German Patent Application* for at least this reason.

Furthermore, claim 1 recites that heated fuel from a high pressure fuel injection system is directed to the reductant source. This limitation is not disclosed, taught or suggested any where in *Wissler*. Specifically, there is no mention of any high pressure fuel injection system in *Wissler*.

Accordingly, claim 1 is patentable.

Claims 3, 4, 7, 8, 9, 11-12, 15-16 and 21-23 all depend either directly or indirectly from claim 1 and are therefore patentable for at least the same reasons.

For instance, claim 3 recites that the reductant source is a reductant supply line contained within a high pressure fuel injection system return line. This limitation is not disclosed, taught or suggested by *Wissler*.

Claim 21 recites that the reductant supply line is made from an elastic material with an expansion coefficient higher than the expansion coefficient of the reductant. The reductant supply line is made of this type of material to prevent damage to the supply line when a reductant freezes. This limitation is not disclosed, taught or suggested by the prior art.

Claim 9 was rejected under 35 U.S.C. § 103 as being unpatentable over the *German Patent Application* in view of official notice. Applicants respectfully traverse this rejection.

To begin with, claim 9 depends from claim 1. As such, claim 9 is patentable for the same reasons as claim 1, as well as for its own specific limitations.

Claim 9 recites a system for use with the method of claim 1. The system comprises a source of fuel, a first source of liquid reductant, an exhaust pipe for discharging exhaust gas from the vehicle, a second source of liquid reductant disposed between the first source of liquid reductant and the exhaust pipe, a fuel tank containing the source of fuel, a

reductant tank containing the source of liquid reductant located within the fuel tank, a high pressure fuel injection system disposed between the fuel source and the second liquid reductant source, a first conduit fluidly connecting the fuel source with the high pressure fuel injection system, a second conduit fluidly connecting the high pressure injection system with the fuel source, a third conduit fluidly connecting the first liquid reductant source with the exhaust pipe, a first high pressure fuel pump to deliver fuel from the fuel source through the high pressure fuel injection system, past the second liquid reductant source, returning to the fuel source, whereby compression of the fuel in the high pressure fuel injection system heats the fuel, and a second pump to deliver liquid reductant from the second liquid reductant source to the exhaust pipe.

In paragraph 8 of the Office Action, the *German Patent Application* is said to disclose "a high pressure fuel injection system (12) disposed between the fuel source (4) and the second liquid reductant source (5); a second conduit fluidly (12) connecting the high pressure injection system with the fuel source;." Notably, the high pressure fuel injection system and the second conduit are both referenced as numeral (12). Numeral (12) discloses a fuel return line. There is no indication, disclosure or suggestion that there is a high pressure fuel injection system in the *German Patent Application*.

Additionally, it is admitted in paragraph 8 of the Office Action that the *German Patent Application* fails to disclose structural components of the claimed system. To overcome these deficiencies, stating that is well known to those of ordinary skill in the art that systems in the *German Patent Application* further comprise the missing structural components, official notice was taken in the Office Action. As it is unclear to Applicants what type of fuel system is employed in the *German Patent Application* and since the present invention was designed specifically to function for its intended use, Applicants respectfully request, in accordance with MPEP §2144.03, that a reference and/or affidavit be supplied to support the official notice taken. Absent such evidence of these structural components being present in the *German Patent Application*, Applicants contend that claim 9 is patentable for this additional reason.

Furthermore, claim 9 recites that the reductant tank is located within the fuel tank. This limitation is similar to the limitations of claim 14 which was rejected under 35 U.S.C. § 103 as being unpatentable over a combination of references. Each reference teaches their own method for dealing with similar deficiencies in the prior art. As such, neither would be motivated to look to the other reference for disclosure on how to correct these deficiencies since they purport to correct these deficiencies on their own. Accordingly, Applicants respectfully suggest that such a combination is not suggested in the prior art.

Claims 11-12, 15-16 and 22-23 all depend either directly or indirectly from claim 9 (and thus claim 1) and are therefore patentable for at least the same reasons as is claim 9 (and thus claim 1). Moreover, these claims recite further limitations that make them independently patentable.

For instance, claim 22 recites that a conduit extends between and fluidly connects the first and second sources of liquid reductant. Such a limitation is not disclosed, taught or suggested in the prior art.

Claim 23 recites that the reductant supply line is made from elastic material with an expansion coefficient higher than the expansion coefficient of the reductant. Such limitation is not disclosed, taught or suggested in the prior art.

Claim 17 was rejected under 35 U.S.C. § 103 as being unpatentable over the *German Patent Application*. Claim 17 recites limitations that are similar to claim 9 and is therefore patentable for similar reasons as claim 9.

Claims 18-20 and 24 all depend either directly or indirectly from claim 17 and are therefore patentable for at least the same reasons as claim 17. Moreover, these claims recite further limitations that make them independently patentable.

Applicants submit that the claims are in a condition for allowance and respectfully request a notice to that effect. If the Examiner believes that a telephone conference will advance the prosecution of this application, such a conference is invited at the convenience of the Examiner.

No additional fees are believed to be due however, if any are found to be due, please charge any additional fees or credit any over overpayment as a result of the filing of this paper to Deposit Account of Applicants' assignee, Ford Global Technologies LLC Deposit Account No. 06-1510 — a duplicate of this paper is enclosed for that purpose.

Respectfully submitted,

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